

G30 自動車工学プログラム／Automotive Engineering Program

卒業研究配属および卒研テーマ／List of Laboratories available at the 4th year with the research project samples

学科名：電気電子情報工学科／Department of Electrical Engineering, Electronics, and Information Engineering

研究グループ名(英語)／Group	卒研テーマ(英語)／Research project	研究室URL／Laboratory URL	指導教員／Supervisor	連絡先／Contact person	Mail address
Electric Energy Storage Engineering	Interfacial phenomena on rechargeable batteries	http://www.nuee.nagoya-u.ac.jp/labs/fukutsuka-lab/index.html	Tomokazu FUKUTSUKA	Tomokazu FUKUTSUKA	fukutsuka@nuee.nagoya-u.ac.jp
Advanced Energy Science, Plasma Energy Group	Metallic nanostructure formation by plasma irradiation for photocatalysis application	http://www.ees.nagoya-u.ac.jp/~web_dai5/	Noriyasu OHNO Shin KAJITA	Noriyasu OHNO	ohno@ees.nagoya-u.ac.jp
Space Electromagnetic Environment (Space Observation)	Studies on electromagnetic environment of geospace around the Earth using radars, GPS receivers, optical interferometers, and satellites.	http://stdb2.stelab.nagoya-u.ac.jp/index_e.html	Kazuo SHIOKAWA	Kazuo SHIOKAWA	shiokawa@nagoya-u.jp
Energy Systems Engineering	Integration of EV/PHEV into Electric Power System	http://www.nuee.nagoya-u.ac.jp/labs/katolab/	Takeyoshi KATO	Takeyoshi KATO	tkato@nuee.nagoya-u.ac.jp
Plasma Electronics	Surface Wettability Control by Plasma Treatment	http://www.nuee.nagoya-u.ac.jp/labs/toyodalab/E/index.html	Hirotaika TOYODA	Hirotaika TOYODA	toyoda@nuee.nagoya-u.ac.jp
Materials and Device Processing Research Group, Nano Process Laboratory	Novel fuel cell device based on nanocomposite materials and plasma nano-processing	http://horilab.nuee.nagoya-u.ac.jp/index.php?id=336	Masaru HORI Hiroki KONDO	Masaru HORI Hiroki KONDO	hori@nuee.nagoya-u.ac.jp hkondo@nagoya-u.jp
	High-performance GaN power devices developed by advanced plasma technologies				
	Surface functionalization technology for car engineering by advanced plasma treatments				
Nano information devices	Crystal growth of nitride-based micro LEDs displays, LDs, power devices, and high frequency devices	http://www.semicond.nuee.nagoya-u.ac.jp/english/index.html	Hiroshi AMANO	Hiroshi AMANO	amano@nuee.nagoya-u.ac.jp
Quantum Opto-Electronics	Novel ultrashort pulse fiber lasers and their application for optical imaging	http://www.nuee.nagoya-u.ac.jp/labs/optelab/en/index_en.html	Norihiko NISHIZAWA	Norihiko NISHIZAWA	nishizawa@nuee.nagoya-u.ac.jp
Quantum Integration Devices Group	Energy-Efficient Cryogenic Devices and Circuits	http://www.super.nuqe.nagoya-u.ac.jp/en/index.html	Akira FUJIMAKI	Akira FUJIMAKI	fujimaki@nuee.nagoya-u.ac.jp
Semiconductor Engineering and Integration Science	Material Characterization and Processing for Advanced Semiconductor Devices	http://www.nuee.nagoya-u.ac.jp/labs/miyazakilab/	Seiichi MIYAZAKI	Seiichi MIYAZAKI	miyazaki@nuee.nagoya-u.ac.jp
Nano-spin Devices Group	Development of High Performance Magnetic Sensors Using Magnetoresistance Effect	http://www.nuee.nagoya-u.ac.jp/labs/iwatalab/index_e.html	Takeshi KATO	Takeshi KATO	takeshi@nuee.nagoya-u.ac.jp
Nano-electron devices	Carbon nanotube-based electron devices	http://ned14.imass.nagoya-u.ac.jp/public/	Yutaka OHNO	Yutaka OHNO	yohno@nagoya-u.jp
Visual Information Group	Image and Video Processing	http://www.fujii.nuee.nagoya-u.ac.jp/index-e.html	Toshiaki FUJII	Toshiaki FUJII	fujii@nuee.nagoya-u.ac.jp
Infomation Systems (Control Systems) Group	Advanced system control of Vehicle and Robot	http://doki-n.nuee.nagoya-u.ac.jp/	Shinji DOKI	Shinji DOKI	doki@nagoya-u.jp
Information Networks Group	Network traffic engineering to create power efficient networks	http://www.nuee.nagoya-u.ac.jp/labs/satolab/en/index.html	Hiroshi Hasegawa	Hiroshi Hasegawa	hasegawa@nuee.nagoya-u.ac.jp
Intelligent Systems	Artificial Intelligence and Natural Language Processing	http://sslalab.nuee.nagoya-u.ac.jp	Satoshi SATO	Satoshi SATO	ssato@nuee.nagoya-u.ac.jp
Advanced Information Environment Group	Big data analysis for Location based Information Systems	http://www.ucl.nuee.nagoya-u.ac.jp/	Nobuo KAWAGUCHI	Takuro YONEZAWA	takuro@nagoya-u.jp
Information Engineering Group	Design and analysis of cryptographic primitives	http://www.nuee.nagoya-u.ac.jp/labs/tiwata/index.html	Tetsu IWATA	Tetsu IWATA	iwata@cse.nagoya-u.ac.jp
Acoustic Speech and Behavior Signal Processing Group	In-vehicle speech and acoustic systems	http://takedalab.g.sp.m.is.nagoya-u.ac.jp/	Kazuya TAKEDA	Kazuya TAKEDA	takeda@is.nagoya-u.ac.jp
	Modeling of traffic/vehicle and driver behaviors				
	Data mining for Field Operational Tests				
Wireless Systems	Theories and Applications of Wireless Communication Systems	http://www.katayama.nuee.nagoya-u.ac.jp/index-e.php	Masaaki KATAYAMA	Hiraku OKADA	okada@nuee.nagoya-u.ac.jp
Space Electromagnetic Environment (Data analysis and Computer Simulation)	Studies on plasma environment of Sun, Solar wind and Geospace by using data analyses on the satellite/ground-based observations based on information science technologies and numerical experiments based on high-performance computing technologies.	https://is.isee.nagoya-u.ac.jp/en/	Yoshizumi MIYOSHI	Yoshizumi MIYOSHI	miyoshi@isee.nagoya-u.ac.jp
Advanced Devices	Materials Characterization for Advanced Semiconductor Power Devices	http://sudalab.skr.jp/	Jun SUDA	Jun Suda	suda@nuee.nagoya-u.ac.jp
Power Electronics Group	1. Power Conversion Systems using GaN/SiC Power Semiconductor Devices for Automotive Application 2. Modeling of Power Conversion Systems for Automotive Application and Aircraft Application	http://pelab.imass.nagoya-u.ac.jp/	Masayoshi YAMAMOTO	Masayoshi YAMAMOTO	m.yamamoto@imass.nagoya-u.ac.jp
Intelligent Devices	CMOS LSI design in healthcare IoTs for driver monitoring application	http://id-lab.jp/http://niitsulab.info	Kiichi NIITSU	Kiichi NIITSU	niitsu@nuee.nagoya-u.ac.jp
	CMOS Driver LSI design in GaN-based wireless power delivery for EV application				
	AI chip design for edge-intelligent autonomous driving application				
Semiconductor Materials	Investigate new materials or orientation for better III-Nitride semiconductor devices	http://mp.imass.nagoya-u.ac.jp/	Markus Pristovsek	Markus Pristovsek	pristovsek@imass.nagoya-u.ac.jp

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学科名: 機械・航空宇宙工学科/Department of Mechanical and Aerospace Engineering

研究グループ名(英語)/Group	卒研テーマ(英語)/Research project	研究室URL/Laboratory URL	指導教員/Supervisor	連絡先/Contact person	Mail address
Material Characterization & Mechanics	Effect of high-density electric current on the material strength of TiAl alloy	http://www.mech.nagoya-u.ac.jp/ju/index_E.html	Yang Ju	Yang Ju	ju@mech.nagoya-u.ac.jp
Manufacturing Engineering	High-Precision/High-Efficiency Machining and Machine Tool	http://www.mech.nagoya-u.ac.jp/upr/English/index.html	Eiji Shamoto	Eiji Shamoto	shamoto@mech.nagoya-u.ac.jp
Manufacturing Process	Ultra low friction and high wear resistance coatings for advanced automobiles	http://ume.mech.nagoya-u.ac.jp/	Noritsugu Umehara	Noritsugu Umehara	ume@mech.nagoya-u.ac.jp
Energy and Environmental Engineering	Development of efficient biomass gasification technology in packed bed gasifier	http://www.mech.nagoya-u.ac.jp/naruse/	Ichiro Naruse Ryo Yoshiie	Ichiro Naruse Ryo Yoshiie	naruse@imass.nagoya-u.ac.jp ryo.yoshiie@mae.nagoya-u.ac.jp
Statistical Fluid Engineering	On the intelligent active control of mixing and diffusion process in an axisymmetric air jet flow	http://www.mech.nagoya-u.ac.jp/sfe/	Yasuhiko Sakai Yasumasa Ito	Yasuhiko Sakai Yasumasa Ito	ysakai@mech.nagoya-u.ac.jp yito@nagoya-u.jp
Thermal Control Engineering	Advanced thermal management technology for next-generation automobiles	http://www.eess.mech.nagoya-u.ac.jp/index.html	Hosei Nagano	Hosei Nagano	nagano@mech.nagoya-u.ac.jp
Biomechanics	Study on the Response of Cells and Tissues to Mechanical Environment	http://bio.mech.nagoya-u.ac.jp/	Takeo Matsumoto	Takeo Matsumoto	takeo@mech.nagoya-u.ac.jp
Safety Intelligence	Investigation into Cognitive Characteristics in The Use of Personalcare Robots	http://www.mech.nagoya-u.ac.jp/asi/en/research/	Yoji Yamada	Yoji Yamada	yamada-yoji@mech.nagoya-u.ac.jp
Human System Engineering	Optimization of crash pulse for reduction of injury risk to vehicle occupants	http://www.mech.nagoya-u.ac.jp/en/laboratories/human.html	Koji Mizuno Daisuke Ito	Koji Mizuno	kmizuno@mech.nagoya-u.ac.jp
Intelligent Robotics	Robot Technologies for Human Assistance	http://www.mein.nagoya-u.ac.jp/index.html	Yasuhisa Hasegawa	Yasuhisa Hasegawa	hasegawa@mein.nagoya-u.ac.jp
Biorobotics and Biomedical Engineering	MEMS Sensor for Detection of Biological Signals of Driver	http://www.biorobotics.mech.nagoya-u.ac.jp/index_e.html	Fumihito Arai	Fumihito Arai	arai@mech.nagoya-u.ac.jp
MEMS and Micromachining	Micromachining of thin film metallic glasses and those application for MEMS sensors	http://mnp.mech.nagoya-u.ac.jp/	Seiichi Hata	Seiichi Hata	hata@mech.nagoya-u.ac.jp
Micro Thermal-Fluids Engineering	Analysis on molecular behavior in high Knudsen number flows	http://www.mech.nagoya-u.ac.jp/mtfe/index_e.htm	Hiroki Yamaguchi	Hiroki Yamaguchi	hiroki@nagoya-u.jp
Computational Mechatronics	Shape Optimization Analyses of Vehicle Interior Sound Fields	http://www.matsumoto.nuem.nagoya-u.ac.jp/	Toshiro Matsumoto	Toshiro Matsumoto	t.matsumoto@nuem.nagoya-u.ac.jp
Mechanical Dynamics Group	Modeling and Parameter Estimation of Inlet and Outlet Boundary of Fluid-Structure Coupled Turbo Machinery Using Machine learning approach	http://www.nuem.nagoya-u.ac.jp/inouelab/	Tsuyoshi Inoue	Tsuyoshi Inoue	inoue@nuem.nagoya-u.ac.jp
Nano Metrology Group	Micro/nano Measurement for Clarifying Boundary Lubrication Phenomena	http://ayame.fukuzawa.nuem.nagoya-u.ac.jp/index_e.html	Kenji Fukuzawa	Kenji Fukuzawa	fukuzawa@nuem.nagoya-u.ac.jp
Dynamical Systems Control Group	Control Theory for Autonomous Vehicles	http://www.ctrl.mae.nagoya-u.ac.jp/	Shun-ichi Azuma Toru Asai	Shun-ichi Azuma Toru Asai	shunichi.azuma@mae.nagoya-u.ac.jp asai@nuem.nagoya-u.ac.jp
Biomechanical Control Group	Multimode multi-user equilibrium assignment for efficient and low emission traffic flow	http://www.uno.nuem.nagoya-u.ac.jp/index_en.html	Kouichi Taji	Kouichi Taji	taji@nuem.nagoya-u.ac.jp
Mobility System	Personalized assistance system design for future vehicle Synthesis and control of automated vehicle	http://www.suzlab.nuem.nagoya-u.ac.jp/index_e.html	Tatsuya Suzuki	Tatsuya Suzuki	t_suzuki@nuem.nagoya-u.ac.jp
Characterization and Optimum Design of Advanced Composite Materials	http://str.nuae.nagoya-u.ac.jp/index.html	Masahiro Arai	Masahiro Arai	masahiro.arai@nagoya-u.ac.jp	arai@nuae.nagoya-u.ac.jp
Shock Wave and Space Propulsion Laboratory	Boundary layer interaction in high-speed flows	http://akagi.nuae.nagoya-u.ac.jp/	Akihiro Sasoh	Akihiro Sasoh	akihiro.sasoh@mae.nagoya-u.ac.jp
Solid Mechanics Research Laboratory	Interaction between mechanical and swelling behaviors of elastomers	http://www.mech.nagoya-u.ac.jp/mml/	Dai Okumura	Dai Okumura	dai.okumura@mae.nagoya-u.ac.jp
Aerospace Vehicle Dynamics Research Group	Multicopter system Attitude and orbit control for small satellites	http://nanosat.nuae.nagoya-u.ac.jp/index_en.html	Shigeru Sunada Takaya Inamori	Shigeru Sunada Takaya Inamori	shigeru.sunada@mae.nagoya-u.ac.jp inamori@nuae.nagoya-u.ac.jp
Advanced Composites Research Group	A Study on mechanical and thermal properties of advanced composite materials and their applications	http://advcomps.nuae.nagoya-u.ac.jp/	Atsuhiko Yamanaka	Atsuhiko Yamanaka	yamanaka@ncc.engg.nagoya-u.ac.jp
Control Systems Engineering Laboratory	Advanced control problems related to aircraft and spacecraft	http://jupiter.nuae.nagoya-u.ac.jp	Susumu Hara	Susumu Hara	haras@nuae.nagoya-u.ac.jp

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学科名: 化学生命工学科／Department of Chemistry and Biotechnology

研究グループ名(英語)／Group	卒研テーマ(英語)／Research project	研究室URL／Laboratory URL	指導教員／Supervisor	連絡先／Contact person	Mail address
Catalyst Design	Automobile catalysts, Nano-metal particles, Zeolites	http://www.chembio.nagoya-u.ac.jp/labhp/physchem2/index.html	Atsushi Satsuma	Atsushi Satsuma	satsuma@chembio.nagoya-u.ac.jp

学科名: 物理工学科／Department of Physical Science and Engineering

研究グループ名(英語)／Group	卒研テーマ(英語)／Research project	研究室URL／Laboratory URL	指導教員／Supervisor	連絡先／Contact person	Mail address
High Pressure Materials Science Group	Research project Syntheses of hydrogen storage materials for green vehicles and Syntheses of magnetic materials for green vehicle	http://highpressure.mp.pse.nagoya-u.ac.jp/index.html	Masashi Hasegawa	Masashi Hasegawa	hasegawa@mp.pse.nagoya-u.ac.jp
Nano-materials properties analysis by electron spectroscopic method	Nano-scale analysis of vehicular exhaustive gas purification catalyst/high-power new secondary batteries/other materials related to automotive applications	http://emu.nucl.nagoya-u.ac.jp/indexJ.html	Shunsuke Muto	Shunsuke Muto	s-mutoh@nucl.nagoya-u.ac.jp

学科名: マテリアル工学科／Department of Materials Science and Engineering

研究グループ名(英語)／Group	卒研テーマ(英語)／Research project	研究室URL／Laboratory URL	指導教員／Supervisor	連絡先／Contact person	Mail address
Multi-Materials Processing research group	Compressive deformation behavior of lattice structured aluminum printed by 3D printing technology	http://www.numse.nagoya-u.ac.jp/P6/kobashi/	Makoto Kobashi, Naoki Takata, Asuka Suzuki	Makoto Kobashi	kobashi.makoto@material.nagoya-u.ac.jp
Process Information Engineering	Bayesian data analysis using sequential Monte Carlo approach	http://www.nuce.nagoya-u.ac.jp/L7/	Yoshiaki Kawajiri	Yoshiaki Kawajiri	kawajiri@nagoya-u.jp

学科名: エネルギー理工学科／Department of Energy Science and Engineering

研究グループ名(英語)／Group	卒研テーマ(英語)／Research project	研究室URL／Laboratory URL	指導教員／Supervisor	連絡先／Contact person	Mail address
Thermal Energy System and Fluid Engineering Laboratory	Drag reduction mechanism in turbulent shear flow	http://navier.energy.nagoya-u.ac.jp/index.html	Yoshiyuki Tsuji	Yoshiyuki Tsuji	y-tsuji@nucl.nagoya-u.ac.jp
八木研究室(環境システム・リサイクル科学)	Fabrication of metal-nanoparticle catalyst and its chracterization		Shinya Yagi, Eiji Ikenaga	Shinya Yagi	yagi.shinya@c.mbox.nagoya-u.ac.jp
	Development of advanced hydrogen storage materials		Shinya Yagi, Eiji Ikenaga	Shinya Yagi	yagi.shinya@c.mbox.nagoya-u.ac.jp

学科名: 環境土木・建築学科／Department of Civil Engineering and Architecture

研究グループ名(英語)／Group	卒研テーマ(英語)／Research project	研究室URL／Laboratory URL	指導教員／Supervisor	連絡先／Contact person	Mail address
中村英樹研究室	交差点における安全性に関する研究	http://www.genv.nagoya-u.ac.jp/ge1/nakamura/index-en.html	中村英樹	中村英樹	nakamura@genv.nagoya-u.ac.jp
	Study on traffic safety at intersections				
Nakamura Lab.(INTERCHANGE)	高速道路の交通流特性に関する研究		Hideki Nakamura	Hideki Nakamura	
	Analysis on traffic flow characteristics on motorways				
森川・山本・三輪研究室	交通需要分析	http://www.trans.civil.nagoya-u.ac.jp/english/index.html	森川高行	森川高行	morikawa@nagoya-u.jp
	Travel demand analysis				
森川・山本・三輪研究室	自動車保有・利用の分析	http://www.trans.civil.nagoya-u.ac.jp/english/index.html	山本俊行	山本俊行	yamamoto@civil.nagoya-u.ac.jp
	Analysis on car ownership and use				
加藤研究室	交通システムの環境負荷のライフサイクル評価	http://orient.genv.nagoya-u.ac.jp/kato/ekato.htm	加藤博和	加藤博和	kato@genv.nagoya-u.ac.jp
	Life cycle assessment with environmental load from transport sytems				
Kato Laboratory	アジア途上国における低炭素交通システムの実現方策検討		Hirokazu Kato	Hirokazu Kato	
	Seeking countermeasures for realizing low-carbon transport systems in Asian developing countries				
井料研究室	交通信号制御に関する研究	http://www.urban.env.nagoya-u.ac.jp/~m-iryo/	井料美帆	井料美帆	iryo@nagoya-u.jp
	Study on traffic signal control				
Iryo Laboratory	歩行者の交通安全分析		Miho Iryo	Miho Iryo	
	Analysis on pedestrian traffic safety				